Power Supplies for the CMS Pixels Test Stand:

Power supplies are needed for:

1. The TBM Board
2. The ADC Interface Board

The TBM Board requires +5 V and -5 V power. There is a three wire power cable to bring power to the board (+5, -5, and ground). This cable attaches to a connector as shown on the website:

http://www.physics.rutgers.edu/%7Ebartz/cms/test/tbm03.html

Please refer to the photograph at this link because the connector is not labeled on the silkscreen of the TBM board.

The ADC Card requires +6.45 V, -6.45 V, and +3.54 V power. The voltages need to be these values to offset loss. Regulated +5, -5 and 3.3 V are derived from these inputs on the ADC card.

The system is currently set up with the +/- 5 V for the TBM provided from the output of voltage regulators on the ADC card. The cable with the TBM power connector is soldered to the appropriate regulator output. This is not recommended for a customer system so two or more supplies may be needed (we are using single supply with three outputs – a configuration more suitable would include a triple output supply for the ADC and a dual output supply for the TBM). Therefore, the current as measured on the supply meter is a combination of current for the TBM board and for the ADC board. The current drawn from each supply is:

+6.45 V (also feeding +5 V of TBM): 654 mA (J7 on ADC card)
-6.45 V (also feeding -5 V of the TBM): 94 mA (J8 on ADC card)
+3.54 V (ADC only): 405 mA (J6 on ADC card)

A rule of thumb for estimating the individual current draws are about 200 mA per ROC plus 100 mA for the TBM on the +6.45 V supply.

The cables needed for the ADC card must be equipped with LEMO style connectors for mating with the ADC card (connectors J6, J7, and J8).